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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Johann Seitz

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EXAMINER

KITOV, ZEEV V

ART UNIT

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2836

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,448	Applicant(s) SEITZ, JOHANN	
	Examiner ZEEV KITOV	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 - 5, 7 - 11, 13 - 15, 17 - 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 5, 7 - 11, 13 - 15, 17 - 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner acknowledges a submission of the amendment and arguments filed on October 1, 2009. Claims 1, 5 and 9 - 11 are amended. A new Office Action follows.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. A reason for that is in following claim limitation: “a switch within the protective device for switching off the electronic switching device in the event of an overload, the switch being connected to the overload relay in parallel” (emphasis added).

Specification does not disclose the switching device (11 in Fig. 1 – 3) being connected in parallel to the overload relay (7 in Fig. 1 – 3). It only states [0027] “a switch 11 for switching off the electronic switching device 2, connected on the load side in the load branch circuit 3, in the event of an overload, and hence to protect the switching device 2 from being destroyed”. The switch is shown in Drawings Fig. 2 and 3 being connected to the overload relay by a dotted line, a symbol used to indicate a functional association.

According to Specification [0027], the overload relay (7 in Fig. 1 – 3) is “a three-pole electrothermal overload relay 7”. In order to respond to a value of a passing current and to be heated by a passing current the relay is to be connected in series with the protected line. Therefore, the switch 11, which is part of the overload relay, cannot be connected in parallel to the relay because in such case the switch would short circuit the relay thus making it disabled. Therefore it is totally unclear how the overload relay, which is allegedly connected in parallel to the switch, may function. For purpose of examination it is interpreted as follows: “a switch within the protective device for switching off the electronic switching device in the event of an overload”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme (EP 0165864) in view of Becker et al. (US 5,127,085). Regarding Claim 1 and 11, Delhomme discloses following: a protective device for a load branch circuit, i.e. circuit board (26 in Fig. 1) comprising: a first protective element, i.e. triacs (10 and 15 in Fig. 1) to provide motor protection (1) and inherently a line protection; and an integral second protective element (12 in Fig. 1) within the protective device (26 in Fig. 1) connected in series with the first protective element and located on a line side of the

Art Unit: 2836

first protective element, including a fuse (12), to provide short-circuit protection of the first protective element and the motor, wherein the second protective element is designed to provide overload protection for an electronic switching device, i.e. for a voltage converter including an inductor (2) with four switches (3 – 6) connected in a bridge configuration, which altogether being connected in series with the first protective element.

According to Specification [0023]: “The protective device 1 according to an embodiment of the invention essentially includes a first protective element 6 having an overload relay 7 for providing motor protection and line protection, and an integral second protective element 8 having fuses 9 for providing short-circuit protection”. In other words, the overload relay is a part of the first protective element. As best understood by the Examiner, the first protective element in the Disclosure consists only of the overload relay (7 in Fig. 2 – 3) and the switch (11 in Fig. 1 - 3).

Accordingly, the Delhomme reference discloses the overload relay (15 in Fig. 1) being a part of the first protection element (10 and 15 in Fig. 1), wherein one of the triacs (15 in Fig. 1) reads on the overload relay and another (10 in Fig. 1) reads on the switch . The overload relay (15 in Fig. 1) is connected in series with the second protecting element (12 in Fig. 1).

However, in the Delhomme circuit the switching device is not located between the protective device and the motor. Becker et al. discloses the switching device, i.e. a voltage inverter (25 in Fig. 2), being positioned between the overload protective device (50 in Fig. 2) and the motor (12 in Fig. 2). Becker et al. further discloses an action of the

Art Unit: 2836

protective device (col. 3, line 66 – col. 4, line 19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Delhomme circuit by moving the switching device (the inverter) to position between the protective device and the motor since in both cases the protective device interrupts the motor current flowing through the switching device thus protecting both the switching device and the motor, and accordingly as stated in the Court Decision *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975), the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice. IN the instant case positioning the switching device upstream or downstream of the protective device does not affect the protection itself; in either case the current is interrupted thus protecting the switching device against overload. Additionally, it is an “obvious to try” case, i.e. choosing from a finite number of predictable solutions when only two positions are available for placing the switching device. The claim would have been obvious because “a person of ordinary skill has good reason to pursue the known option within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense”. See *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 82 USPQ2d 1321 (Fed. Cir. 2007).

Regarding Claim 11, Delhomme discloses an equivalent first means for providing motor protection and line protection, i.e. the triacs (10 and 12) located within the protective device (26 in Fig. 1); and an equivalent integral second means, i.e. fuse (12) located within the protective device for providing short-circuit protection of the first protective element and the motor, wherein the second equivalent means is designed to

Art Unit: 2836

provide overload protection for an electronic switching device, the electronic switching device being in series with the first equivalent protective means, and wherein the first equivalent means includes an overload relay (10, 16) in series with the second protective means (12).

Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Becker et al. and current design practice. As per Claim 7, it requires a trip response of the first protective element, i.e. circuit breaker, being coordinated with the rating of a protected switching device. Such requirement is a normal part in the rules of protection system design, since otherwise if it is not coordinated, i.e. if the trip threshold is set higher than a maximum current that the switching device can withstand, the switching device will be damaged thus defeating a purpose of use of the protection system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set a threshold of the protection device such that it would effectively protect all the elements of the circuit.

As per Claim 17, the same considerations as in Claim 7 rejection are valid with respect to the trip response of the first equivalent means (see Claim 7 rejection above).

Claims 5, 10, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Becker et al. and Damiano et al. (US 4,691,197). Regarding Claims 5, 10, 15 and 20, Damiano et al. discloses an auxiliary switch (SCR in Fig. 1) used to signal the status of the fuse (12 in Fig. 1, col. 2, line 11 -

Art Unit: 2836

col. 3, line 42) located within the protective device as shown in Fig. 4. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the auxiliary switch and indicator to indicate the status of the fuse, because it is necessary to attract attention of maintenance personnel to take care of a fault problem when it is necessary.

Regarding Claims 15 and 20, Damiano et al. discloses an equivalent means for signaling the status of the fuse (see above Claims 5 and 10 rejections).

Claims 3, 4, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Becker et al. and Frank (US 2,324,852). Regarding Claims 3, 4, 13 and 14, Delhomme discloses the fuse (12). However, it does not disclose the fuse being transferable to maintenance position. Frank discloses a safety switch (Fig. 1) used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Delhomme system according to teachings of Frank, i.e. providing a fuse box and a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance.

Claims 8, 9, 18, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Becker et al., Bueher et al. (US 5,223,681) and Frank. Regarding Claims 8 and 18, requiring the switching device and protective device having widths of the same dimensions, it is actually requirement of widely used modular design approach. Buehler et al. teaches a modular design approach, which according to him (col. 2, lines 51 – 56), provides following advantages: making easier future modifications, allowing small modifications to existing modules to fit customers needs, adding or subtracting modules to fit the customer's needs, taking module out, modify it, insert and as a result having a totally different circuit breaker. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the Delhomme system by arranging the main elements of the system in a modular form, i.e. having the same mounting dimensions because (1) as well known in the art, the circuit breakers today are mostly manufactured with standard modular dimensions when all the modules with rare exception have the same mounting dimensions and (2) exercising the modular approach will bring the recited above advantages.

Regarding Claims 9 and 19, Frank discloses a safety switch (Fig. 1) used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was

Art Unit: 2836

made to further modify the Delhomme system according to teachings of Frank, i.e. providing a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance. As to motivation for modifying the Delhomme circuit in view of Frank, see Claims 3, 4, 13 and 14 above.

Regarding Claim 21, Delhomme discloses the protective device and the switching device. Bueher et al. teaches the modular structure of the protective device. As to the protective device being pluggable, according to online encyclopedia Answers.com and Wikipedia, "In systems engineering, modular design — or "modularity in design" — is an approach that subdivides a system into smaller parts (modules) that can be independently created and then used in different systems to drive multiple functionalities. Besides reduction in cost (due to lesser customization, and less learning time), and flexibility in design, modularity offers other benefits such as augmentation (adding new solution by merely plugging in a new module), and exclusion". Accordingly, modular design assumes easy replacement of modules by plugging them in and out. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the Delhomme in view of Bueher et al. modular protective device arranging the device as being pluggable into the base device i.e. into the switching device of because (1) the modular design of the protective mechanism brings recited above advantages as stated by Bueher, and (2) the module being pluggable is well known and widely used feature of the module, which facilitates the modular design advantages.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman

Art Unit: 2836

can be reached on (571)-272-2391. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

/Z. K./

Examiner, Art Unit 2836

11/3/2009

/Stephen W Jackson/

Primary Examiner, Art Unit 2836